Review of the Austrian Hematologic Literature

Year 1958

The increased erythrocyte sedimentation rate in infectious processes could be slowed by the use of Antistin by an average of 51.5 per cent. In malignant tumors, the inhibition was not significant. In bronchial carcinoma the inhibition was usually absent (E. Schultheiss, K. Maté, F. Schultheiss). Speiser studied the incidence of carcinomas of female genitalia and mammary carcinoma with relation to blood groups and also Rh factor.

Th. Pöschl and H. Schwind found that the hematocrit value after a bleeding of 200 cc. remained unmodified during delivery and also during puerperium. No change of the hematocrit was observed during delivery, even with bleedings of 200 to 400 cc. However, with this amount of bleeding the hematocrit was found diminished during puerperium. With bleedings of 400 cc. and above, the hematocrit value sank during both delivery and puerperium.

Investigations by A. Schneiderbaur and F. Rettenbacher on normals as well as on patients with liver cirrhosis demonstrated that the α-fraction of the plasma electrophoresis diagram is a mixture of proteins (fibrinogen and parts of gamma, and sometimes even beta globulins) which cannot be identified with fibrinogen alone.

Cs. Hadnagy described 10 cases of blood transfusion accidents with contaminated blood or preserved plasma. Causes were: (1) pyrogen reaction, (2) shock, (3) "Reilly phenomenon," (4) toxic cellular damage, (5) toxic damage of red cell antigenic structure. Relative advice on the treatment was given.

W. Kutschera and H. Narbeshuber reported their experience on the prophylactic treatment of nonhemolytic transfusion reactions with the use of Sandosten-Calcium.

E. Gisinger studied the diagnostic and prognostic significance of copper and of copper-iron determinations in blood disorders. O. Rainer published a paper on the diagnostic significance of the serum unsaturated iron-binding capacity in normal and in different diseases. (Average values: normal females, 209.5 ± 50.7 μg.; males, 202 ± 65.7 μg.). In hemosiderosis extremely low values were found, while higher than normal values were seen in iron deficiency. R. Neuhold wrote on the derangements of iron metabolism in liver diseases. He concluded for a breakdown of the "mucosal block" with consequent hemochromatosis. F. Leibetseder and H. Kosanowski studied the iron deficiency syndrome with occult anemia or without anemia. The main symptoms found were heart complaints. J. Bohnel and A. Stacher described their experience on the treatment of iron deficiency anemia with "Myofer." G. Weippl reported on a complex iron deficiency anemia in a 13 month old child with carotenel jaundice and macrocytic anemia. Folic acid could only improve the red blood count number and the anemia became hypochromic.
Iron administration cured the anemia. The same author also described two cases of iron deficiency anemia in prematures and the effect of treatment with transfusions and cobalt in the former and with iron in the latter case.

J. Bauer discussed the problem of sickle cell anemia. He thinks that in this disease the major problem concerns blood circulation. The blockage of the peripheral blood vessels would cause death of the patients and not the anemia.

R. Klima, I. Beyreder and H. Rieder reviewed the problem of osteofibrosis. The appearance of megakaryocytes in the buffy coat was of good diagnostic value. The disease could begin as polycythemia vera and end in myeloblastic leukemia, or liver cirrhosis, or bone marrow aplasia. The main symptom was a giant spleen.

L. Popper, in his study on lead poisoning, concluded that the more frequent manifestation of lead poisoning is peripheral neuritis and colics, while the anemia appears rarely. Investigations by F. Lasch and G. Schneider in neighborhoods where lead was mined or where people were working with lead showed that the inhabitants often had very high values of lead in the blood and urine, the cause of which was drinking of lead-containing water.

H. Benzer, G. Hiener and A. Strasser gave experimental demonstration that narcosis does not cause any change in blood coagulation as long as blood CO₂ is not increased. P. Elsner wrote a review on coagulation disorders. R. Mlczoch described favorable results obtained with the thrombin preparation "Toposterin" in oozing types of bleedings. E. Gottinger contributed to the knowledge of the kinetics of the thrombin reaction. The study included turnover ratios, viscosity properties and temperature dependability. The formation of fibrin from fibrinogen and thrombin followed the principle of the polycondensation of a 3 dimensional macromolecule. Thrombin took part in this reaction in a simple stoichiometrical proportion.

The problem of local prophylactis and treatment of thromboembolic disorders was studied by H. Benzer by means of thromboelastographic investigations in vitro with heparin, "Thrombozid," thrypsin and streptokinase. Using a combination of these, the fibrinolytic effect was shown to be increased. T. Astrup discussed new aspects of blood coagulation and fibrinolysis in their relationship to coronary thrombosis and sclerosis. He discussed the dynamic equilibrium between fibrin deposition, coagulation and fibrinolysis.

Drug-induced leukopenias and thrombocytopenias, as well as the idiopathic forms, the newborn purpura, the purpura of S.L.E. and other types, and also the pathogenetic significance of autoantibodies were discussed by C. Steffen, who reported on his serologic investigations. The idiopathic forms were defined as "autoaggressive" in type. H. Richter described two cases of agranulocytosis, one with a fulminating, the other with a chronic relapsing course. In the population of Vienna, P. Speiser found eight different genetic red cell systems and compared them with the theoretically calculated and the really found numbers of cases of erythroblastosis.

R. Mlczoch reported on spontaneous rupture of the spleen in a case of splenic vein thrombosis. K. Portele described the morphologic and func-
tional characteristics of the so-called "implanted splenosis" of the peritoneum. A. Schneiderbauer reported on a special case of liver cirrhosis with splenitis, plasmacellular reaction and hypoprothrombinemia.

A. Stacher and J. Böhnel treated 77 cases of blood disorders with prednisolone. The autoimmune disorders gave excellent remissions, not always, however, a lasting cure. In the disorders of the lymphatic systems with low numbers of leukocytes in the peripheral blood prednisolone acted in a cytostatic manner.

E. E. Reimer gave a review on the blood and bone marrow damage from ionizing radiation. Aplastic crises with bone marrow aplasia (Owren's syndrome) in two cases of hemolytic anemia in siblings were described by K. Makrycostes and X. Kurkumeli. The aplastic crises were interpreted as due to specific idiosyncrasy.

H. Braunsteiner and N. Thumb studied the basophilic leukocytes and the significance of their increase with reference to the body metabolism. Increased numbers of basophils were found in cases with increased total blood lipids (degradation of macromolecular lipids with consequent heparin increase, experimentally confirmed). Increased numbers of basophils with a normal blood picture were found to be against the diagnosis of hyperthyroidism (when diabetes and nephrosis had been ruled out), while low numbers of basophils (when cortisone effect had been excluded) were against the diagnosis of myxedema.

E. Keib advised in the treatment of leukemias the intermittent use of x-ray and of various cytostatic substances. G. Brichta, J. Kühbock and E. Reiner reported excellent results with N-Lostphosphamide in lymphosarcoma. In Hodgkin's lymphogranuloma and in lymphadenoses the remission lasted only 3 months.

A. Stacher and J. Böhnel described a singular case of cyclic, leukemic-aleukemic lymphadenopathy with polyuria and subsequent drop of the leukocytes, shaking chills and fever. In the serum a lymphocyte-destroying factor, although not an antibody, was found. Lymphogranuloma was found relatively frequent in advanced age by W. Kutschera and O. Balzer.

St. Wuketich and G. Siegmund discussed 9 cases of typical Waldenström's macroglobulinemia and concluded that the diagnosis of this disorder cannot rely on the observation of one single symptom, but only of groups of symptoms. Particular diagnostic value was given to the "lymphoid" cells in the bone marrow, the positive "Sia-Sandkühler" test, the electrophoretic finding of paraproteinemia and the carbohydrate content of the paraprotein fraction.

The C-reactive protein test gave mostly negative results in plasmocytoma. This finding was considered characteristic by G. Geyer, and it is supposed to have diagnostic importance. L. Benda, E. Deutsch and E. Mammen found a strange coagulation defect in a case of multiple myeloma without clinical evidence of bleeding. The defect could be corrected with the use of protamin sulfate. The pathologic gamma globulin interfered with the second phase of coagulation. F. Reinhardt studied the Bence Jones protein and showed that each plasmocytoma patient excretes his own chemically and serologically
characteristic Bence Jones protein. This is not built directly by the plasma cells. In suspensions of myeloma cells from a case of plasmocytoma the author was able to demonstrate, besides the pathologic gamma globulin fraction, a protein fraction with a sedimentation constant of 2.8 to 3 S, which, however, did not give the typical heat reaction of the Bence Jones protein. It was concluded that the synthesis of myeloma globulins and of the Bence Jones protein may be the result of two independent mechanisms.

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REFERENCES

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